U.S. Information Services Industry

1991-1996 Outlook

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Vice President
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Topics

- Historic Perspective
- Driving Forces
- Market Outlook
- Opportunities and Conclusions

IS-55

Notes

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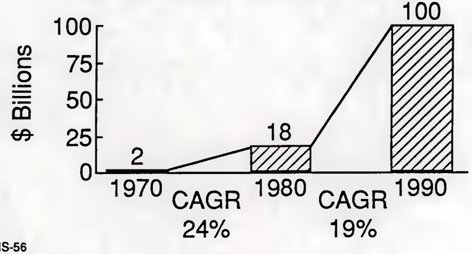
U.S. Information Services Industry, 1970-1990



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Notes

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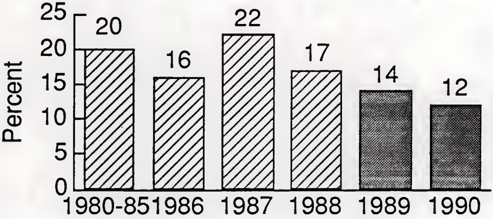
U.S. Information Services Industry—Annual Growth Rates



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U.S. Information Services Industry, 1970 - 1990

- The industry grew 50 times
- U.S. economy grew 5.7 times
- Consists of 11,000 vendors
- Created a U.S. competitive strength

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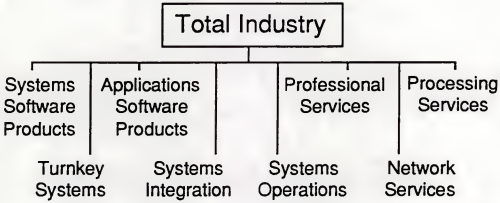
Information Services Industry Structure



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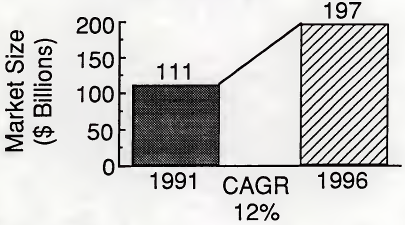
U.S. Information Services Market, 1991-1996



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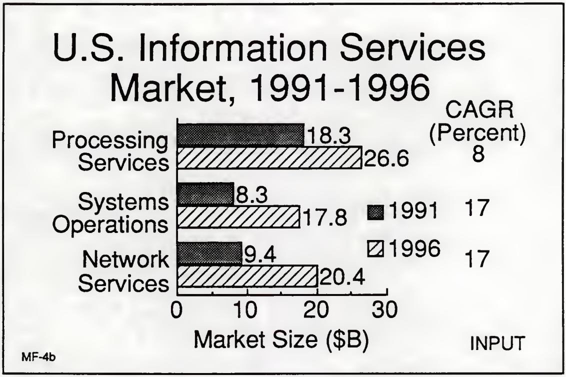

Notes

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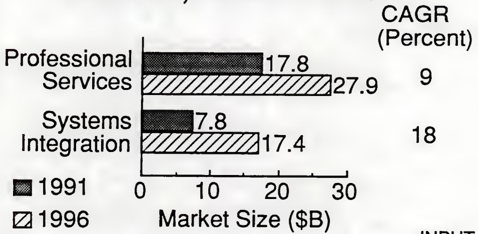
U.S. Information Services Market, 1991-1996



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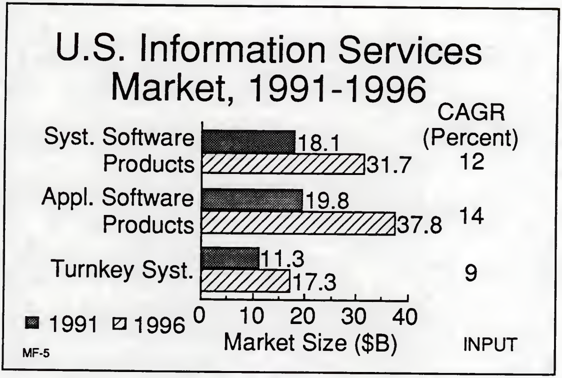

Notes

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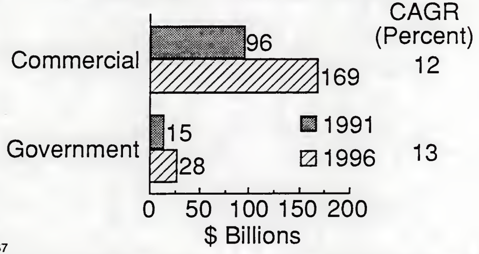
U.S. Information Services Market, 1991-1996



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Notes

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U.S. Information Services Market—Vertical Sectors

Largest	Fastest Growing
Banking and Fin.	State and Local Gov't.
Discrete Mfg.	Telecommunications
Federal Gov't.	Discrete Mfg.
Process Mfg.	Retail Distribution

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Selected Leading Information Services Vendors

Vendor	1990 U.S. Rev. ($B)	Market Share (Percent)
IBM	5.8	6
EDS	2.4	2
ADP	1.7	2

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Selected Leading Information Services Vendors

Vendor	1990 U.S. Rev. ($B)	Market Share (Percent)
Computer Sciences	1.5	2
Digital Equipment	1.3	1
Andersen Consulting	1.2	1

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The Computer Industry in the 1990s

What is Different?

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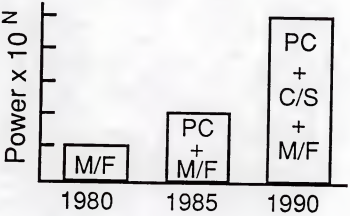
Computing Power



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The Systems Industry—Past

Demand increase - 30% to 40% per year

+

Price/performance improvement - 20% per year

=

Industry growth - 10% to 20% per year

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MACFC-PAC - 6

Notes

The Systems Industry— Now

Demand increase - 30% per year ?

+

Price performance improvement - 40% per year

=

Industry Shrinkage

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The Systems Industry—Past

Operating environments protected core systems prices

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The Systems Industry—Now

Open Systems

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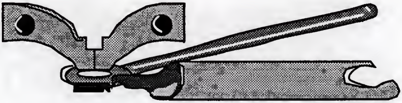

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Notes

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Revolutions

- Downsizing
- Outsourcing
- Networking

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Types of Downsizing

- Platform driven
- Application driven
- Organization driven

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Platform Driven Description

- Replacement of the core processing capability (platform) on a price/performance basis.

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Downsizing

Application Driven Description

- Transfer of the application, either user interface or all, to a workstation or LAN environment.

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LAN Use—Active Central Applications

Application	% Act. 1990	% to be Act.—1992
Accounting	45	60
Executive Info Sys	27	65
Mainframe DBS Queries	40	72

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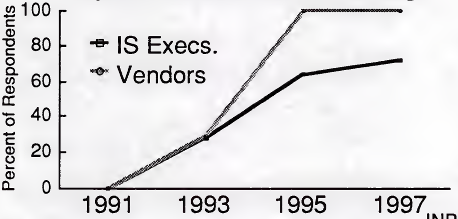
Downsizing

Major Client/Server Applications Implementation Timing



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IS Outsourcing Areas

1. Systems operations
2. Applications maintenance
3. Applications management
4. Network operations
5. Desktop services

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OU-7

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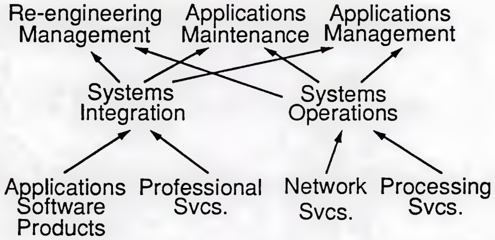
Systems Management Opportunities



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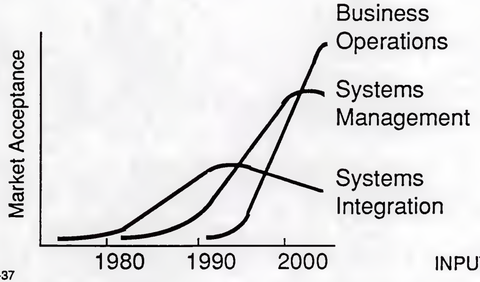
Outsourcing Market Waves



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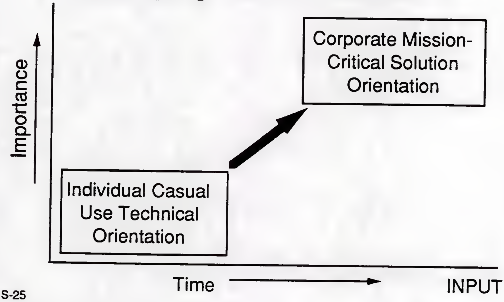
Changing Role of Network



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Open Systems

- Removes shield of proprietary technology
- Strengthens networking capabilities
- Removes price protection
- Changes the competitive rules

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Vendor Independence

Portability and interoperability is across multivendor environments

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Open Systems—Level by Level

- Chip Set
- Processor
- Operating environment and networking
- Data base management
- Applications interface/GUI
- Business applications

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Revolutions or Evolutions?

- Re-engineering
  - Organization: All or parts
  - IS Organization

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Re-engineering IS

- Used to be a separate function
- Now being integrated into organization
- Will it disappear?

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The Changing Buyer

- General manager becomes primary buyer
- IS becomes internal consultant
- Solutions versus technology

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The Changing Buyer

- Decisions become larger—take longer
- The budget is decentralized—multiple buyers

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Definiton of Electronic Commerce

- Electronic commerce is the electronic, network-based coordination of material, people, and processes that facilitates commercial exchange

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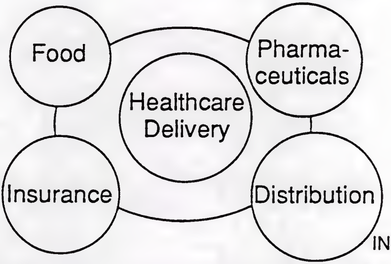
Electronic Commerce

Healthcare Trading Community



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Electronic Commerce

Effects and Dynamics

- Participation of many parties
- Business transaction becomes the focus
- Restructuring of industry processes
- Restructuring of trading community
- Users become vendors

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The Computer Industry in the 1990s

Technology Revolutions

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Organizational Evolutions

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All the rules have changed

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Opportunities and Conclusions

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U.S. Information Services Industry

Conclusions

- Slower growth for 1991-1996
  - Slow rebound 1991-1992
  - Market growth 10% to 15% per year
    - 1991—less than 10%
    - 1996—15%
  - Maturity in some sectors

SC-15

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U.S. Information Services Industry

Conclusions

- Outsourcing will be the bright spot
  - Services versus products
  - Solutions versus systems
  - Primary versus secondary vendors

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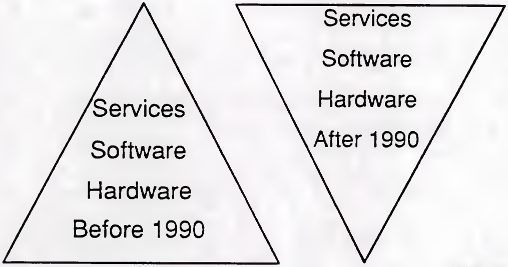
Industry Turned Upside Down



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U.S. Information Services Industry

Conclusions

- Outsourcing will be the bright spot
  - Functions versus projects
  - Long-term agreements
  - Increased reliance on vendor
  - Increased risk for vendor

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Notes

U.S. Information Services Industry

Conclusions

- Influence of large vendors will grow
  - Partnerships/Alliances
  - Minority investments
  - Account control through services

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Notes

U.S. Information Services Industry

Conclusions

- Vendor characteristics will change
  - Product vendors become services vendors
  - Primary vendors become secondary contractors

SC-18

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Where Is the New Beginning?

- Real user is the buyer
- Solutions not products or services
- Client-server could lead to a revolution

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Where Is the New Beginning?

- Outsourcing = basis for shared success
- Standards eventually open new opportunities
- Regionalization of market

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Single Message

Solutions focus on:

what it does

NOT

how it does it

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MACFC Title Info. Serv. Ind. Out [redacted] 10/91	ROW name [redacted] RDW 9/24/92	IS55 [redacted] 9/28/91	IS56 [redacted] 9/28/91
IS 57 [redacted] 9/28/91	IS 58 [redacted] 9/28/91	IS-2 [redacted] 9/28/91	MF. 3 [redacted] 10/29/91
MF-4b [redacted] 10/29/91	MF-4a [redacted] 10/29/91	MF-5 [redacted] 10/29/91	IS67 [redacted] 9/28/91
IS-68 [redacted] 9/28/91	MF-6a [redacted] 9/21/91	MF-6b [redacted] 9/21/91	AIJPN-OT-4 [redacted] 1/10/92

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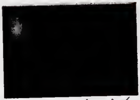
3 CALYPSO COLORS MAY/1991 [redacted] MS-24	MACFC-PAC-6 [redacted]	MACFC-PAC-7 [redacted]	MACFC-PAC-8 [redacted]

9/27/91 ED-59a



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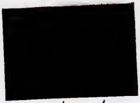

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SC-17 red

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IS-71a

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IS 71b

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IS 72

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IS-73

9/28/91

MACFC-PAC-9	MACFC-PAC3	U11SP-PAC-8 11/15/91	U11SP-PAC-9 11/15/91
U11SP-PAC-12 11/15/91	I-95 4/5/91	MACFC-OT-26 11/15/91	OU-7 10/25/91
OU-21 8/8/91	IS-37 3/7/91	NS25 1990	AWPH-OT-5 1/10/92
U11SP-OT2-12 1/2/92	AWPH-OT-6 1/1/92	MACFC-PAC-4	MACFC-PAC-12
IS-64 9/28/91	IS-64b 9/28/91	ED-54 9/27/91	ED-57 9/27/91